

**New Genera of Male Brachycistidinae with A Redescription of
Brachycistellus Baker and A Key to North American Genera**
(Hymenoptera : Tiphiiidae)

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In a recent revision of the genus *Brachycistis* Fox for America north of Mexico (Wasbauer, 1966) I have recognized six genera in the male series and have given a tentative key for their separation. The overall purpose of the present study is to aid in recognition of the genera of North American Brachycistidinae in anticipation of a revision of Nearctic species (exclusive of the genus *Brachycistis*) now in progress. The immediate aim is threefold: first, to provide descriptions of two additional new genera; second, to provide a redescription of the monotypic genus *Brachycistellus* Baker, the type of which has recently been found in the collection of the U. S. National Museum; and third, to relate these taxa with previously known forms through discussions and a revised key to the genera now known for North America.

I wish to acknowledge with gratitude, the assistance received from Hugh B. Leech, California Academy of Sciences, San Francisco, and Calvert Norland, San Diego State College, for assistance in verifying the C. F. Baker type label on the holotype of *Brachycistellus figitiformis* and to P. H. Arnaud, Jr., and E. S. Ross, California Academy of Sciences, for making available to me material on which I have based one of the genera described here. Thanks are also due to K. V. Krombein, U. S. National Museum, for locating and loaning to me the type specimen of *Brachycistellus figitiformis* Baker.

The terminology employed in the following descriptions is in general use by students of aculeate Hymenoptera with the exception of a few terms relating to mensural ratios. Ratios were obtained at 100 \times with a 100 division ocular micrometer. Distances were measured in a flat plane of focus and were converted directly to ratios by use of a slide rule. Measurements of wing cells included the veins forming the boundaries of the cells. For the sake of brevity and convenience in expressing ratios, the following abbreviations have been used:

CR—Clypeal ratio. The maximum length of the clypeus in full frontal view, from the epistomal suture to the apex, divided by the maximum width.

EH—Eye height, measured in full frontal view.

FD—Facial distance. The length of the head in full frontal view, from the vertex to the apex of the clypeus.

L—Length.

LID—Lower interocular distance. The minimum distance between the lower margins of the compound eyes.

OOL—Ocellocular length. The shortest distance from the lateral ocellus to the compound eye.

POL—Postocellar length. The shortest distance between the lateral ocelli.

SM₁—First submarginal cell.

SM₂—Second submarginal cell.

TFD—Transfacial distance. The maximum distance across the head in full frontal view (from the outer margin of one compound eye to the outer margin of the other).

Hadrocistis¹ Wasbauer, new genus

ADULT MALE.—Head (Figs. 1, 4) more or less rounded, broader than long, TFD about 1.3 FD; ocelli strongly enlarged; compound eyes very large, convergent below, inner margins slightly emarginate; antennal sockets with simple rims which are slightly thickened below; antennae rather short, L/W flagellar segment 1, 1.85–2.50; clypeus somewhat produced apically, CR .40–.46, disk slightly, broadly convex; mandibles slender, bidentate, frontal surface ecarinate; maxillary and labial palpi short, slender, maxillary palpi 3–5 segmented; labial palpi 1–2 segmented.

Mesosoma.—Robust, pronotum vertical, mesonotum arising directly above it and in plane or in a slight curve with its dorsal edge, humeral angles rounded, not prominent; mesonotum with parapsidal furrows strongly impressed; mesepisternum strongly expanded, evenly convex; dorsal surface of propodeum without well defined lateral raised areas, posterodorsal transverse carina absent, lateral surfaces relatively smooth, not sculptured; anterior coxa without admesal stridulatory area; posterior coxa not carinate; wings relatively short, usually not extending to apex of metasoma, venation somewhat reduced, anterior wing (Figs. 13, 14) with two submarginal and two discoidal cells; first transverse cubital vein arising before apical third of first submarginal cell; marginal cell short, strap-shaped, narrowed posteriorly, costa extending along costal margin for a distance much less than half length of stigma; posterior wing (Figs. 13, 14) with radius and cubitus well developed, cubitus arcuate, forming an angle with the transverse cubital of less than 135 degrees, jugal lobe longer than, equal to or slightly shorter than submedian cell.

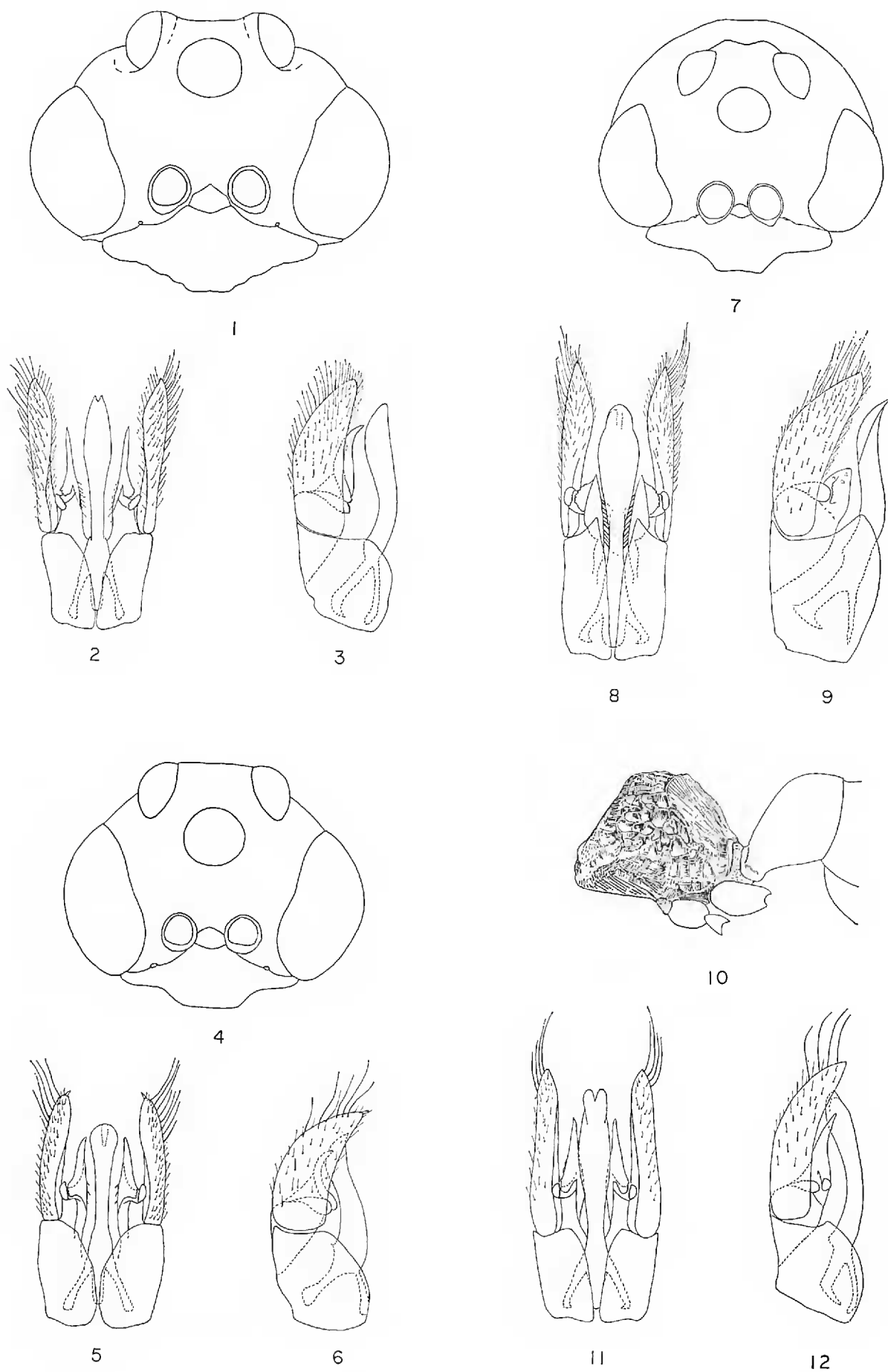
Metasoma.—First metasomal sternum flat or slightly convex, without a broad, deep concavity posteriorly, second metasomal sternum simple, without carinae or raised areas; genitalia (Figs. 2, 3, 5, 6) with process of digitus aculeate, strongly upcurved, produced far distad of articulum; volsellar plate with a number of short, stout, anteriorly directed spines on mesal surface.

FEMALE.—Unknown.

TYPE OF GENUS.—*Hadrocistis bicolor* Wasbauer.

Specimens referable to *Hadrocistis* may be distinguished from those belonging to other brachycistidine genera by the following combination of characteristics: clypeus somewhat elongate, clypeal ratio .40–.45; palpi short, not always visible; maxillary palpi 3–5 segmented, labial

¹ Gr. Hadros: well developed, and kiste: box or chest, referring to the robust mesosomatic tagma.



FIGS. 1-3. *Hadrocistis slanskyae*. FIG. 1. Head, dorsal view. FIGS. 2-3. Genitalia. FIG. 2. Dorsal. FIG. 3. Lateral. FIGS. 4-6. *Hadrocistis bicolor*. FIG. 4. Head, dorsal view. FIGS. 5-6. Genitalia. FIG. 5. Dorsal. FIG. 6. Lateral. FIGS. 7-9. *Dolichetropis*

palpi 1-2 segmented; mandibles slender, bidentate; marginal cell of forewing short, strap-shaped; two submarginal and two discoidal cells present; propodeum not sculptured; anterior coxa without stridulatory area; hind coxa not carinate; metasomal sterna without carinae or elevations; genitalia (Figs. 2, 3, 5, 6) with process of digitus prolonged beyond articulum, unciform, strongly upcurved.

This genus appears to have its closest ally in *Brachycistina* Malloch. It shares with the latter the robust body form, produced clypeus, very small maxillary and labial palpi, slender and bidentate mandibles, presence of two submarginal cells in the anterior wing, the first transverse cubital vein arising basad of the apical third of the first submarginal cell, short and strap-shaped marginal cell and lack of admesal stridulatory areas on the front coxa. It differs, however, in the absence of spines dorsally on the hind tibia, the presence of only two discoidal cells and the genitalia with characteristically unciform and upcurved digital processes which extend beyond the articulum.

***Hadrocistis bicolor* Wasbauer, new species**

HOLOTYPE.—Head black; clypeus dark mahogany brown toward apex; mandibles light yellow-brown, becoming piceous at apices; antennae light yellow-brown; mesosoma dark mahogany brown, nearly black; pronotum slightly lighter; legs beyond coxae yellow-brown; stigma dark mahogany brown; metasoma lighter than mesosoma, medium mahogany brown. Vestiture moderately abundant, uniformly straw-colored over entire body; appressed over most of body; suberect on clypeus, prosternum and scutellum; erect on posterior face and dorsolateral angles of propodeum; a curved row of suberect hairs on each metasomal sternum; most abundant on head posteriorly, pronotum medially, mesonotum anteriorly and propodeum posteriorly, absent on dorsum of propodeum. Body not strongly punctured, punctures small, shallow, third degree density on head becoming second degree density on vertex between ocelli, several large, shallow punctures on disk of clypeus just before apex; small, shallow, third degree density over remainder of body except second degree density on dorsolateral angles of propodeum and first metasomal tergum; dorsum of propodeum impunctate.

Head (Fig. 4).—Compound eyes strongly enlarged, EH/LID 1.18; LID/TFD .43; OOL/POL .42; vertex raised and slightly convex between lateral ocelli, ocelli thus not appearing protuberant dorsally; antennae relatively short, L/W first flagellar segment 2.2; clypeus gently but noticeably convex medially; maxillary palpi 5 segmented, length equal to or slightly greater than length of gular orifice;

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flavida. FIG. 7. Head, dorsal view. FIGS. 8-9. Genitalia. FIG. 8. Dorsal. FIG. 9. Lateral. FIGS. 10-12. *Brachycistellus figitifformis*. FIG. 10. Propodeum (coxae and anterior segments of metasoma in outline). FIGS. 11-12. Genitalia. FIG. 11. Dorsal. FIG. 12. Lateral.

labial palpi 3 segmented, slightly less than half length of gular orifice; gular carina low, not produced into an elevation anteriorly.

Mesosoma.—Propodeum short, broad; dorsal surface minutely reticulate; posterior face about as long as dorsal surface, in lateral view very slightly convex, nearly flat medially; anterior wing (Fig. 14) slightly infusate beyond apex of marginal and submarginal cells; L/W marginal cell 1.9; L/W stigma 2.3; SM_1/SM_2 2.65.

Metasoma.—Apical tergum (Fig. 18) with a polished, slightly convex pygidial area which is not strongly set off from remainder of tergum; genitalia (Figs. 5, 6) in lateral view with aedeagus upcurved toward apex, process of digitus without a distinct dorsal flange; in dorsal view aedeagus widest at apex.

Length.—6.8 mm.

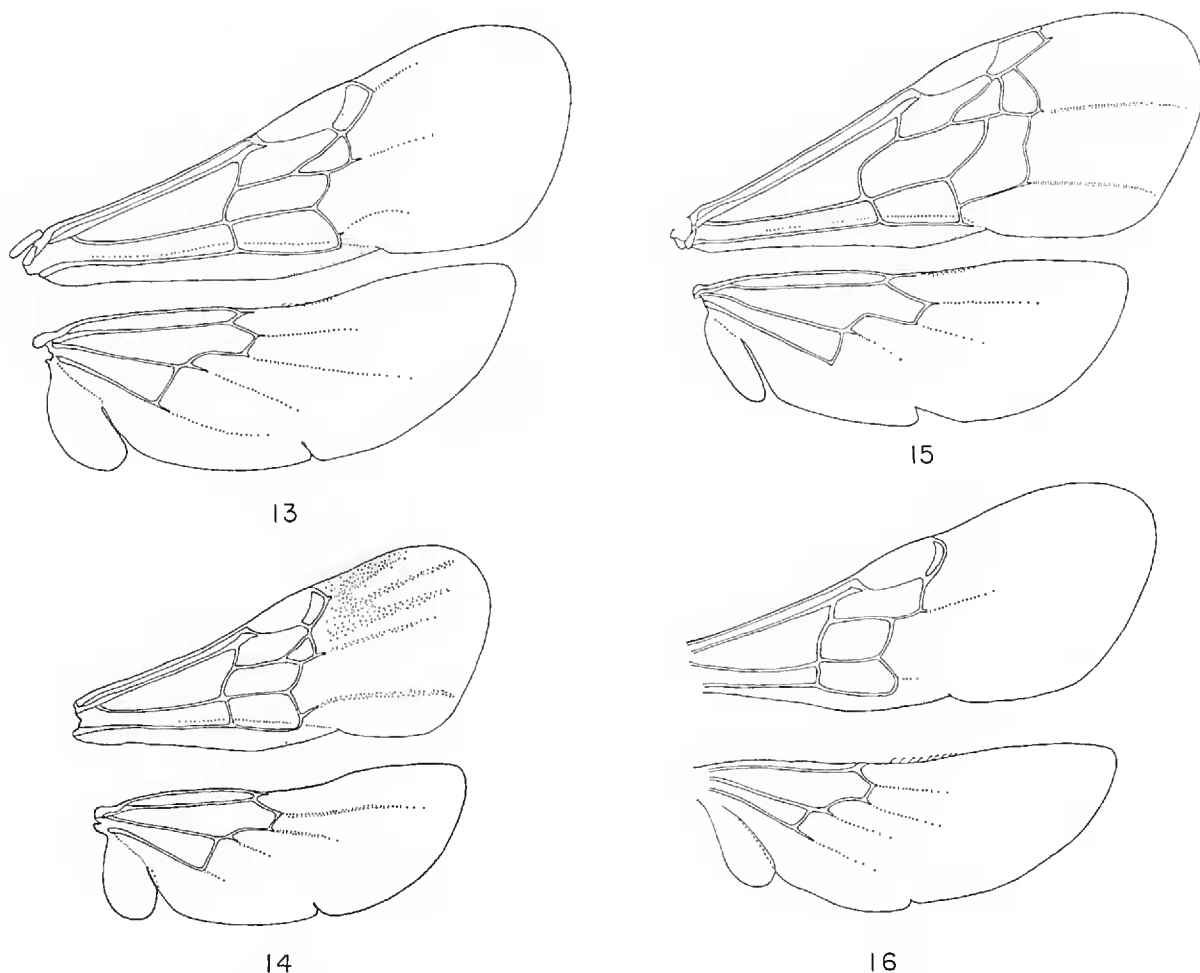
Variation ($n = 20$); length 3.1–8.7 mm; EH/LID 1.00–1.18; LID/TFD .40–.48; OOL/POL .35–.43; L/W flagellar segment 1, 1.87–2.50; infusate area of forewing very faint to strong. L/W marginal cell 1.67–3.12; L/W stigma 2.12–2.58; SM_1/SM_2 2.21–2.94.

TYPE MATERIAL.—*Holotype* and thirty-five paratypes, 6 MILES WEST OF GLAMIS, IMPERIAL COUNTY, CALIFORNIA, 5 August 1966, at fluorescent black light (M. Wasbauer collector). Thirty-one paratypes, same locality but 19 September 1966, at fluorescent black light (R. A. Flock collector). One paratype, Andrade, Imperial County, California, 4 August 1966, at fluorescent black light (M. Wasbauer collector). Two paratypes, 6 miles west of Calexico, Imperial County, California, 16 August 1966, at fluorescent black light (R. A. Flock collector). The holotype (no. 9564) has been deposited in the collection of the California Academy of Sciences. Paratypes have been distributed to the California Academy of Sciences, the United States National Museum, the Museum of Comparative Zoology at Harvard College and the University of California at Davis.

***Hadrocistis slanskyae* Wasbauer, new species**

HOLOTYPE.—Head, mesosoma and metasoma uniform medium brown; pronotum a little lighter than mesonotum; clypeus and mandibles piceous at apex, stigma dark brown. Vestiture moderately abundant, uniformly light straw yellow, nearly white over entire body; appressed over most of body, suberect on clypeus, vertex, dorsolateral areas of propodeum and posterior metasomal segments, erect on posterior face of propodeum and first metasomal tergum; most abundant on vertex, dorsolateral areas and posterior face of propodeum, absent on dorsum of propodeum. Body not strongly punctured, punctures large, irregular, first degree density toward apex of clypeus, smaller second degree density on mesepisternum anteriorly, third degree density on remainder of body; dorsum of propodeum impunctate.

Head (Fig. 1).—Compound eyes strongly enlarged, EH/LID .95; LID/TFD .47; OOL/POL .72; vertex distinctly concave between lateral ocelli, the ocelli thus appearing protuberant dorsally; antennae moderately long, L/W first flagellar



FIGS. 13-14. Wings of *Hadrocistis* spp. FIG. 13. *H. slanskyae*. FIG. 14. *H. bicolor*. FIGS. 15-16. Wings. FIG. 15. *Dolichetropis flavida*. FIG. 16. *Brachycistellus figitiformis*.

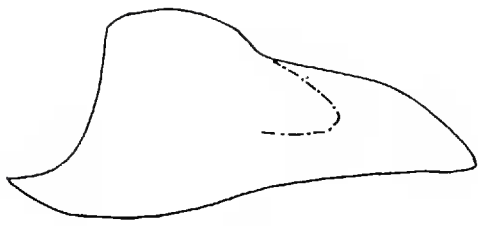
segment 2.5; clypeus slightly convex near insertion, nearly flat toward apex; maxillary palpi very short, 3 segmented, length less than half gular orifice; labial palpi inconspicuous, 2 segmented; gular carina low, not produced into an elevation anteriorly.

Mesosoma.—Propodeum short, broad, dorsal surface faintly reticulate, appearing polished, posterior face about as long as dorsal surface, in lateral view slightly convex; anterior wing (Fig. 13) hyaline, without infuscate areas; L/W marginal cell 1.94; L/W stigma 2.72; SM_1/SM_2 2.32.

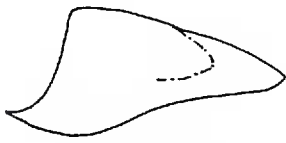
Metasoma.—Apical tergum (Fig. 17) with a strongly convex, reticulate pygidial area which in lateral view is set off from remainder of segment by a broad sulcus; genitalia (Figs. 2, 3) in lateral view with aedeagus nearly straight along dorsal margin, not upcurved toward apex, process of digitus with a distinct dorsal flange; in dorsal view, aedeagus widest much before apex.

Length.—8.6 mm.

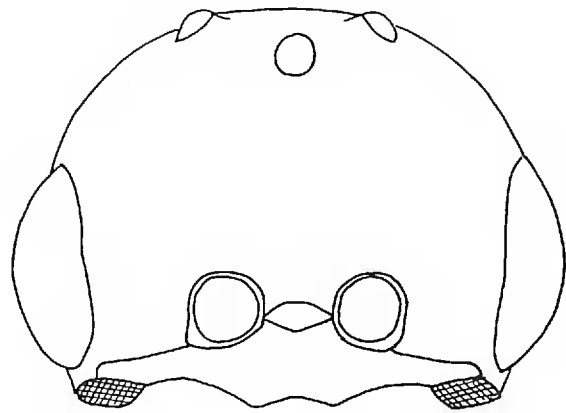
Variation ($n = 17$); length 7.0–10.9 mm; EH/LID .925–1.05; LID/TFD .43–.48; OOL/POL .54–.82; L/W flagellar segment 1, 2.18–2.73; L/W marginal cell 1.83–2.34; L/W stigma 2.50–3.00; SM_1/SM_2 1.74–2.36.



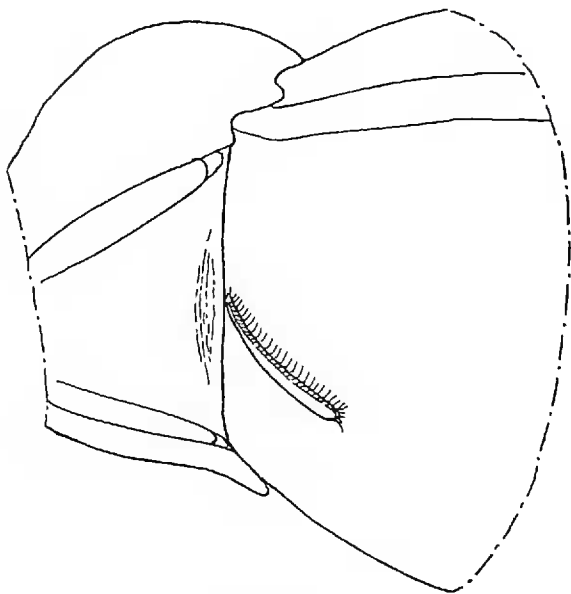
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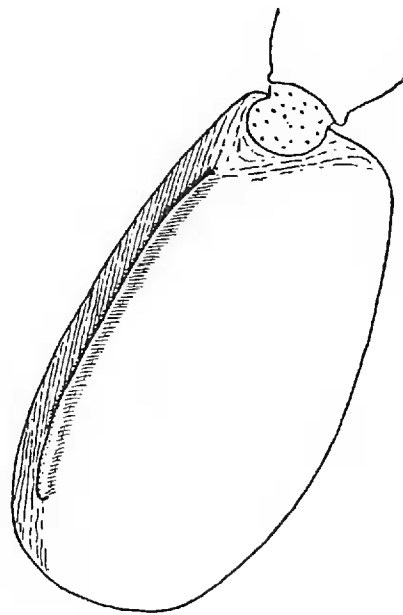
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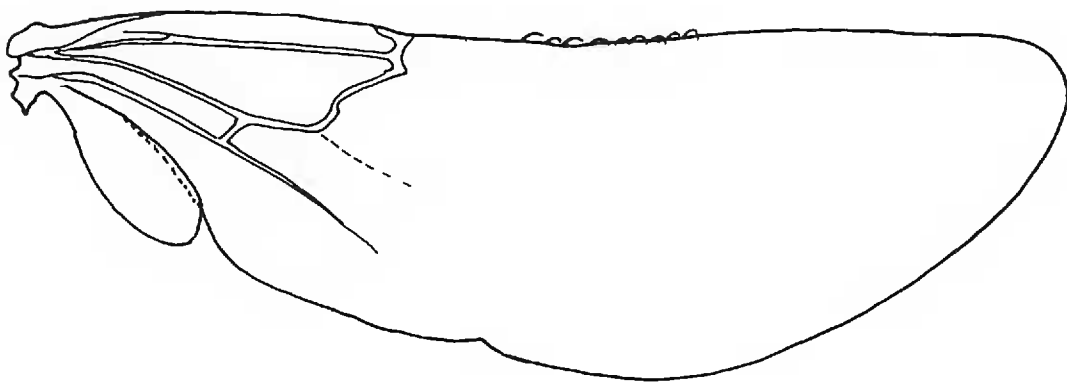
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TYPE MATERIAL.—*Holotype* and five paratypes, 6 MILES WEST OF GLAMIS, IMPERIAL COUNTY, CALIFORNIA, 5 August 1966, at fluorescent black light (J. E. Slansky collector), eleven paratypes, same locality and date (M. Wasbauer collector). The holotype (no. 9563) has been deposited in the collection of the California Academy of Sciences. Paratypes are in the collections of the California Academy of Sciences and the United States National Museum.

Hadrocistis slanskyae may be distinguished from *H. bicolor* by its somewhat larger size, the head and mesosoma no darker than the metasoma, the vertex concave between the lateral ocelli, the entirely hyaline forewing and the hump-shaped pygidial area, set off from the remainder of the segment by a broad sulcus.

Dolichetropis² Wasbauer, new genus

ADULT MALE.—Head (Fig. 7) more or less rounded, broader than long, TFD 1.1–1.3 FD; ocelli strongly enlarged; compound eyes very large, convergent below, inner margins distinctly emarginate, antennal sockets with simple rims which are not or scarcely thickened below; antennae relatively short, L/W flagellar segment 1, 1.7–2.5; clypeus noticeably produced apically, CR .40–.45, disk slightly convex; mandibles slender, tridentate, dorsal surface with a distinct curved carina; maxillary and labial palpi short, slender, six and four segmented respectively.

Mesosoma.—Slender; pronotum nearly vertical, mesonotum arising above and in line with it; humeral angles rounded, not prominent; mesonotum with parapsidal furrows strongly impressed; mesepisternum evenly convex; dorsal surface of propodeum without lateral raised areas, posterodorsal transverse carina absent, lateral surfaces not sculptured; anterior coxa with distinct, elongate, admesal stridulatory area; posterior coxa not carinate; wings long, usually extending to apex of metasoma, venation well developed, anterior wing (Fig. 15) with three submarginal and three discoidal cells, marginal cell elongate, extending along costal margin for a distance somewhat less to slightly more than half length of stigma; posterior wing (Fig. 15) with radius and cubitus well developed, cubitus strongly arcuate, forming an angle with transverse cubital of much less than 135 degrees; jugal lobe shorter than submedian cell.

Metasoma.—First metasomal sternum nearly flat, without a broad, deep concavity posteriorly; second metasomal sternum simple, without carinae or raised areas; genitalia (Figs. 8, 9) with process of digitus short, blunt; volsellar plate with a number of long, slender, anteriorly directed setae on mesal surface.

FEMALE.—Unknown.

² Gr. Dolichos: long, and etron: abdomen, referring to the elongate metasoma.

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FIGS. 17–18. Apical metasomal terga, *Hadrocistis* spp. FIG. 17. *H. slanskyae*. FIG. 18. *H. bicolor*. FIG. 19. Head, *Brachycistellus figitiformis*, dorsal view. FIG. 20. Portions of first and second metasomal sterna, *Acanthetropis noctivaga*. FIG. 21. Posterior coxa, *Colocistis castanea*. FIG. 22. Posterior wing, *Quemaya arenicola*.

TYPE OF GENUS.—*Dolichetropis flavida* Wasbauer.

Dolichetropis appears to be closely related to *Brachycistis* Fox and may have developed from a stock ancestral to the Nitida group. *Brachycistis nitida* (Cress.) is quite similar in many respects to the type species of *Dolichetropis*. Both species have the gular orifice reduced somewhat in size, lack a gular elevation, have short and blunt processes of the digitus, a fairly long marginal cell in the forewing, and a row of stout spines dorsally on the hind tibia. *D. flavida*, however, has the maxillary and labial palpi reduced in size, the clypeus prolonged at the apex and the mandibles slender, the subapical mandibular teeth poorly developed. In all species of *Brachycistis*, the maxillary palpi are well developed, the clypeus more or less transverse and the subapical mandibular teeth projecting.

***Dolichetropis flavida* Wasbauer, new species**

HOLOTYPE.—Head medium brown, clypeus, mandibles, antennal scape and pedicel, palpi, legs, mesosoma and metasoma uniformly light yellow-brown, antennal flagellum darker yellow-brown. Vestiture moderately abundant, uniform light straw yellow over most of body, slightly darker on apical metasomal segments, decumbent, suberect or erect, most abundant on pronotum laterally, mesonotum anteriorly, prosternum, scutellum and posterolateral areas of propodeum; absent on dorsal surface of propodeum. Body not strongly punctured, punctation of first degree density only on pronotum and mesonotum anteriorly, just above wing bases and a small area dorsolaterally on propodeum, elsewhere second and third degree density, punctures of two sizes interspersed on head, pronotum, mesonotum and propodeum, of uniform size on mesepisternum; disk of scutellum and metanotum, dorsum of propodeum polished, impunctate medially.

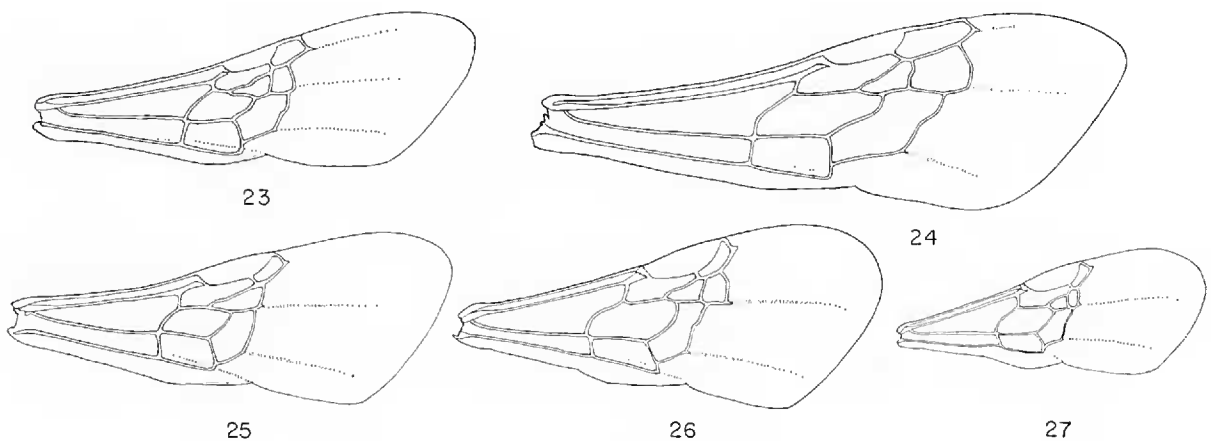
Head (Fig. 7).—Compound eyes enlarged, EH/LID .96; LID/TFD .48; OOL/POL .64; vertex in full frontal view extending much above tops of lateral ocelli with a short, recurved, impressed line medially just posterior to lateral ocelli; L/W flagellar segment 1, 2.4; clypeus produced, medioapical portion truncate, dorsal surface nearly flat, slightly convex medially; gular carina low, not produced into an elevation anteriorly.

Mesosoma.—Propodeum moderately long, dorsal surface polished, impunctate medially, posterior face convex, meeting dorsal surface in a broad curve; hind tibiae with a dorsal and subdorsal row of spines before the apex, spines of dorsal row stout, curved, those of subdorsal row shorter, not as strongly curved; anterior wing (Fig. 15) hyaline, without infuscate areas; L/W marginal cell 2.16; L/W stigma 3.55; SM₁/SM₂ 1.64.

Metasoma.—Elongate; genitalia (Figs. 8, 9) in lateral view with process of digitus short, tuberculate at apex; ventral margin of gonostylus more or less evenly curved from base to apex; aedeagus in lateral view with a strongly upcurved flange at apex; in dorsal view, spatulate, widest before apex.

Length.—11.1 mm.

Variation (n = 12); length 6.3–11.7 mm; EH/LID .82–.94; LID/TFD .48–.53; OOL/POL .60–.71; L/W flagellar segment 1, 2.0–2.29;



FIGS. 23-27. Anterior wings of brachycistidine wasps. FIG. 23. *Colocistis castanea*. FIG. 24. *Acanthetropis noctivaga*. FIG. 25. *Brachycistina acuta*. FIG. 26. *Brachycistis agama*. FIG. 27. *Brachycistis petiolata*.

L/W marginal cell 1.63-2.16; L/W stigma 3.21-4.00; SM_1/SM_2 1.46-1.97.

TYPE MATERIAL.—*Holotype* and ten paratypes, 15 MILES NORTH OF SAN IGNACIO, BAJA CALIFORNIA, 24 June 1938 (Michelbacher and Ross collectors) and two paratypes with all data the same as the preceding except for the date, 27 July 1938. The holotype (no. 9565) is in the collection of the California Academy of Sciences. Paratypes have been placed in the collections of the California Academy of Sciences and the United States National Museum.

BRACHYCISTELLUS Baker

The monotypic genus *Brachycistellus* was proposed by C. F. Baker (1909) to accommodate a species based on a single specimen which he captured "flying by day" at Claremont, California. No mention was made of the deposition of the type specimen. Pate (1947) included the genus in his conspectus and employed a character to separate it from *Quemaya* Pate which was not mentioned in the original description indicating that possibly he had seen the type or perhaps had material before him which he considered conspecific with it. At any rate, the status of *Brachycistellus* remained in doubt for some time since no specimens had been collected which shared the salient features given in Baker's description. In 1955, R. O. Schuster collected a single specimen at Colusa, California, in the northern Central Valley, an area generally depauperate in brachycistidines. This specimen was taken in an area over four hundred miles from the type locality and with a somewhat different climate and ecology but agrees closely with the original description. Hence, it was used as a source of characters for placement

of *Brachycistellus* in my previous key (Wasbauer, 1966: 15). In 1966, Baker's type came to light in a shipment of material from the United States National Museum. In the same shipment was another specimen with the same data, probably collected by Baker at a later time. These three specimens, all conspecific and collected over a period spanning nearly fifty years, thus form the basis of our present knowledge of the genus *Brachycistellus*.

ADULT MALE.—Head (Fig. 19) oval, broader than long, TFD 1.4 FD; ocelli not enlarged; compound eyes narrow, scarcely protuberant, not convergent below, inner margins nearly parallel, not emarginate; antennal sockets with simple rims, slightly thickened below; antennae very short, L/W flagellar segment 1 less than 1.6; clypeus narrow, strap-shaped, CR .21–.24; mandibles slender, tridentate, frontal surface carinate; maxillary and labial palpi well developed, maxillary palpi 5 segmented, labial palpi 3 segmented.

Mesosoma.—Robust, pronotum with slight posterior slope; mesonotum arising above and in line with it; humeral angles rounded, not prominent; mesonotum with parapsidal furrows strongly impressed; mesepisternum evenly convex; dorsal and lateral surfaces of propodeum (Fig. 10) with a number of sharp irregular rugae separating shallow concavities; posterodorsal transverse carina present; anterior coxa without well defined admesal stridulatory area; posterior coxa not carinate; wings long, usually extending to apex of metasoma, venation reduced, anterior wing (Fig. 16) with one large submarginal and two discoidal cells, marginal cell very short, strap-shaped, extending short distance along apex of stigma; posterior wing (Fig. 16) with radial and cubital veins well developed, cubitus arcuate, forming angle with transverse cubital of less than 135 degrees; jugal lobe equal to or slightly less than length of submedian cell.

Metasoma.—First metasomal sternum nearly flat, without deep concavity posteriorly; second metasomal sternum simple, without carinae or raised areas; genitalia (Figs. 11, 12) with process of digitus produced into lanceolate process extending far distad of articulum; volsellar plate with several stout, anteriorly directed setae on mesal surface.

FEMALE.—Unknown.

TYPE OF GENUS.—*Brachycistellus figitiformis* Baker (by monotypy).

Brachycistellus somewhat resembles *Quemaya* at least superficially. The reduction of veins in the anterior wing giving only one submarginal and two discoidal cells is the condition characteristic of most *Quemaya* species. In the posterior wing of *Brachycistellus*, however, the radius, cubitus and transverse cubitus are distinct. The cubitus is arcuate and joins the transverse cubitus at only slightly more than a right angle. In *Quemaya* the veins of the hind wing run together in nearly a straight line, the cubitus intersecting the transverse cubitus at an angle of at least 135 degrees. The very heavily sculptured propodeum is perhaps the most characteristic feature of *Brachycistellus* and sets it apart from other brachycistidine genera immediately. In the male genitalia, the

process of the digitus is long and lanceolate, a feature shared with most species of the genus *Brachycistis*.

BRACHYCISTELLUS FIGITIFORMIS Baker

Baker stressed the very deep second metasomal segment which he said gave this insect "a most remarkable superficial resemblance to a figitid." He further stated that in addition to this trait, the high, arched mesonotum and broad first metasomal segment give *B. figitiformis* "a habitus quite distinct from *Brachycistis*." Actually, there are now known several *Brachycistis* which have the robust body form characteristic of this species, and as mentioned earlier, the species of *Quemaya* are all superficially quite similar to it.

HOLOTYPE.—Entirely black; head with vague bluish reflections; clypeus, mandibles at base, stigma, tegulae, femora and tibiae very dark mahogany brown, mandibles somewhat lighter distad of middle. Vestiture moderately abundant, consisting of long erect to suberect hairs, uniformly white over entire body, becoming pale straw yellow on legs; most abundant on occiput, scutellum and first metasomal tergum, absent from dorsum and posterior face of propodeum. Body not strongly punctured, punctures very small, sparse, scattered on head; larger, second degree density on pronotum; very large, first to second degree density on posterolateral surfaces of scutellum, becoming smaller, third degree density on dorsal surface; smaller, scattered, third degree density on mesonotum; larger, second degree density on mesepisternum anteriorly, becoming third degree density posteriorly; shallow, irregular, first degree density laterally on anterior surface of first metasomal tergum, becoming second degree density medially; very shallow, irregular, third degree density on posterior dorsal surface; minute, third degree density with scattered larger punctures on second and succeeding metasomal terga with a curved, impressed punctate line before apex of each.

Head (Fig. 19).—Polished and strongly shining, compound eyes narrow, EH/LID .53; LID/TFD .73; ocelli not enlarged, lateral ocelli as near compound eyes as each other, OOL/POL 1.0; vertex in full frontal view, not extending above tops of lateral ocelli; L/W flagellar segment 1, 1.50; clypeus narrow, very slightly convex medially, beveled to thin, flat, lamellate edge medioapically; gular carina produced anteriorly into a tooth-like elevation.

Mesosoma.—Propodeum (Fig. 10) short, dorsal surface less than half length of posterior face, posterodorsal transverse carina irregular but distinct; legs short, relatively stout, middle and hind tibiae with a row of three slender spines on dorsal surface before apex; wings (Fig. 16) hyaline, anterior wing without infuscate areas; L/W stigma 2.50; L/W submarginal cell 3.29.

Metasoma.—Short, stout, first metasomal segment short, broad, .77 width of second segment in dorsal view; genitalia (Figs. 11, 12) in lateral view with process of digitus elongate, lanceolate, upcurved, acute at apex; ventral margin of gonostylus very broadly emarginate near base, then evenly curved to apex; aedeagus with strong downward curve, in dorsal view gradually expanded, widest just before apex, the apex deeply notched medially with distinct dorsal flanges.

Length.—4.45 mm.

Variation ($n = 3$); length 3.90–4.76 mm; EH/LID .53–.58; LID/TFD .70–.73; L/W flagellar segment 1, 1.50–1.58; L/W stigma 2.25–2.50; L/W SM 2.75–3.29; hind tibia with 3 to 4 spines in dorsal row.

The holotype of *B. figitiformis* is damaged as follows: left antenna missing beyond first flagellar segment, right antenna missing beyond pedicel, right forewing broken at base, left anterior leg missing beyond femur, left middle leg missing beyond tibia, left posterior leg missing beyond femur, right anterior and middle legs with apical tarsal segments missing, right posterior leg missing beyond femur. Description of structures missing from the damaged holotype was drawn from the Baker topotype. The illustration of the propodeum (Fig. 10) is based on the Colusa, California, specimen. The holotype bears a small printed label: "Claremont, Cal. Baker" and a hand printed label, with a double border in black and in Baker's handwriting: "*Brachycistellus* n. gen. *figitiformis* n. sp." The holotype is in the collection of the United States National Museum.

The data on the two specimens examined other than the holotype is as follows: 1) "Claremont, Cal. Baker." No further data [U.S.N.M.]. 2) Colusa, Colusa County, California, 15 August 1955. (R. O. Schuster collector.) [C.I.S.]

KEY TO GENERA OF BRACHYCIDINE MALES

1. Anterior wing with one or two discoidal cells (Figs. 13, 16); anterior coxa without well defined admesal stridulatory area 2
 Anterior wing with three discoidal cells (Fig. 15); anterior coxa usually with well defined admesal stridulatory area composed of successive striae 4
2. Posterior wing with cubitus arcuately curved, longer than transverse cubital vein and meeting it at angle of less than 135° (Fig. 16); digitus of genitalia with distinct elongate process 3
 Posterior wing with cubitus nearly straight and in line with transverse cubital vein and meeting it at angle much greater than 135° (Fig. 22); digitus of genitalia without a distinct elongate process *Quemaya* Pate
3. Ocelli and compound eyes not enlarged (Fig. 19); propodeum heavily rugose with distinct arcuate carina separating dorsal and posterior faces (Fig. 10); anterior wing with one submarginal cell (Fig. 16)
 *Brachycistellus* Baker
- Ocelli and compound eyes enlarged (Figs. 1, 4); propodeum smooth, without transverse carina separating dorsal and posterior faces; anterior wing with two submarginal cells (Figs. 13, 14) *Hadrocistis* Washbauer
4. Clypeus strongly produced apically (Fig. 7), clypeal ratio at least .40; maxillary palpi short, not surpassing posterior border of gular orifice by amount equal to half length of palpus 5
 Clypeus not produced apically (as in Fig. 19), clypeal ratio not exceeding

- .35; maxillary palpi long, exceeding posterior border of gular orifice by amount at least equal to half length of palpus 6
5. Costa of anterior wing extending along margin distad of stigma for distance equal to at least one-third length of stigma (Fig. 15); three submarginal cells present; maxillary palpi six segmented; digitus of genitalia with short process extending distad of articulum (Figs. 8, 9)
Dolichetropis Wasbauer
- Costa of anterior wing extending along margin for distance much less than one-third length of stigma (Fig. 25); two submarginal cells present; maxillary palpi three segmented, inconspicuous; digitus of genitalia without process *Brachycistina* Malloch
6. Second metasomal sternum with elevated median longitudinal carina or fold at base (Fig. 20); costa of anterior wing extending distad of stigma for distance exceeding half length of stigma (Fig. 24)
Acanthetropis Wasbauer
- Second metasomal sternum without median longitudinal carina at base; costa of anterior wing extending distad of stigma for distance less than half the length of stigma 7
7. First transverse cubital vein of anterior wing arising at or before basal third of first submarginal cell (Fig. 23); posterior coxa with longitudinal carina on inner margin (Fig. 21); digitus of genitalia without process extending distad of articulum *Colocistis* Krombein
- First transverse cubital vein of anterior wing arising beyond basal third of first submarginal cell (Figs. 26, 27); posterior coxa without longitudinal carina on inner margin; digitus of genitalia with process extending distad of articulum *Brachycistis* Fox

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